

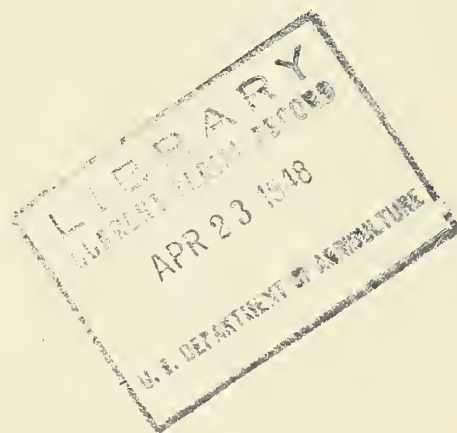
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MARKETING ACTIVITIES



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U. S. Department of Agriculture
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Packers-Stockyards Act Developments

By M. J. Cook

The Packers and Stockyards Act was passed by Congress in 1921 to correct certain abuses in the livestock-marketing and meat-packing industries. It gives the Secretary of Agriculture jurisdiction over all public stockyards meeting the area and interstate commerce requirements of the act, and the operations of commission firms, dealers, and packers engaged in selling and buying livestock at those markets.

In general, the act provides--

1. For adequate facilities and services to livestock producers at public stockyards;
2. For reasonable charges against livestock producers for stockyard services, and reasonable charges for the selling and buying services furnished by commission firms;
3. For open competitive conditions when livestock consigned by producers to commission firms is sold;
4. For accurate weighing of such livestock;
5. For full and correct accountings to the livestock producers and buyers for whom commission firms act as selling and buying agents; and
6. That stockyard companies, commission firms, dealers, and packers shall not engage in unfair, deceptive, or discriminatory practices that are against livestock producers' interests.

Daily Operations Observed

In carrying out day-to-day regulation under the act, the Production and Marketing Administration, through its Livestock Branch, maintains supervisory offices at 20 principal markets. Marketing-specialist members of the field supervisory forces observe daily operations in the stockyards, seeking to discover any lack in facilities or services, any unfair, deceptive, or discriminatory practices engaged in by stockyard companies or selling agencies, dealers, or packers operating at the yards, and any conditions detrimental to the interests of livestock producers patronizing the public markets.

For the same purposes PMA marketing specialists make periodic visits to outlying supervised markets in each district. They investigate hundreds of informal complaints filed by producers relating to livestock sales made for producers' accounts at public markets. If it is warranted by the facts turned up on investigation, an adjustment or settlement of the claim is obtained from the stockyard company, commission firm, or dealer concerned. In addition to making investigations of informal complaints, PMA in this work handles many formal reparation

claims which producers file against parties subject to the act.

There are now 204 stockyards posted under the act. Of these, 65 are what are generally described as terminal markets and 139 are live-stock auction markets. Registered to operate at these supervised markets are 2,100 commission firms and 2,800 dealers. During the last few years the number of packers known to be operating under the act has increased very considerably--to about 2,100.

To assure performance of the financial obligations they incur in selling and buying livestock at supervised markets, registered commission firms and dealers have been required to file bonds totaling more than 30 million dollars. This requirement, plus periodic audits made by PMA accountants of the records of commission firms, has done much to maintain financial stability in the livestock marketing industry and to protect shippers' proceeds held in trust by the commission firms. In recent years producers have suffered practically no losses through defaults of registered firms.

Segregation of Funds Proposed

With a view to affording even greater protection, PMA recently proposed a new regulation which would require every sales agency to set up a separate bank account for the exclusive handling of producers' funds. Registered commission firms would be required to hold producers' funds in trust, as agents of the producers. In addition, this segregation of funds would give each producer having funds on deposit in such a custodial bank account the benefit of the maximum insurance provisions of the Federal Deposit Insurance Act, in the event of a bank failure.

From the producers' standpoint, probably one of the most important provisions of the Packers and Stockyards Act is the one that makes the Secretary of Agriculture responsible for determining the reasonableness of stockyard yardage rates and the commission charges of registered selling and buying agencies. In recent years stockyard companies and commission firms, in order to compete for labor with other industries, have had to increase wages substantially. They have also paid more for construction, repairs, and stockyard equipment. As a result of these mounting costs, many stockyard companies and commission firms have asked approval of increased rates. When possible, these requests have been handled through informal conferences with committees from the industry after detailed information has been carefully evaluated. In general, increases in yardage and commission rates have been held to a level that represents only the costs it has been necessary to add in order to maintain reasonable stockyard and selling services.

Yardage for cattle at posted markets averages about 55 cents a head and selling commissions for cattle average about 90 cents a head. Considering the present level of livestock prices, such marketing costs are not excessive. Major improvements in facilities and services to patrons at several supervised markets are necessary to assure the yarding and selling of producers' livestock so as to obtain its true market value. Completion of these improvements may result in somewhat higher

yardage and commission rates, but the general benefits to market patrons will greatly exceed the additional costs. Although requests to PMA for rate increases have been scaled down to a point that will save producers hundreds of thousands of dollars annually, nothing has been done that would deprive stockyard companies or selling agencies of needed revenue or impair stockyard or selling services. Instead, the act has been administered in a way that would encourage the livestock marketing industry to improve stockyard facilities and services.

For years, livestock dealers and butcher speculators have operated lucrative businesses at most of the public stockyards without paying anything toward operating costs, maintenance, or replacement of pens, scales, and the many other stockyard facilities which they used regularly in conducting their business. In recent years, PMA has required stockyard companies seeking additional revenues to get them in part through appropriate yardage charges against dealers. This policy has reduced the burden on livestock producers. During the last 2 1/2 years, yardage charges have been assessed against dealers at the rate of more than a half a million dollars annually. Yardage charges against livestock producers who patronize these markets are proportionately less. In both formal and informal rate cases, stockyard companies have been required to assess against dealers operating at their yards charges commensurate with the services the dealers have received.

Dependable Weighing

At the 204 markets posted under the act, approximately 700 scales are in regular use for weighing livestock. These important instruments play a large part in determining how much producers will receive for their livestock. A small force of PMA scale technicians supervises the installation, maintenance, and operation of all stockyard scales. Each scale must be tested and inspected by a competent agency at regular intervals and meet certain standards of accuracy and dependability. Accuracy requirements for livestock scales are more strict than in any other field of industrial or commercial weighing where large-capacity scales are used. No scale is allowed to remain in service if it shows errors greater than 1 1/2 pounds per thousand pounds of load--fifteen one-hundredths of 1 percent. Reported cases of careless weighing are investigated by PMA market supervisors. Specially trained investigators make undisclosed observations of the performance of any weigher suspected of false weighing.

Plans have been made to extend supervision to the weighing facilities and practices that packers use in weighing the livestock they buy direct from producers at the packers' plants or at their country buying stations. More than 800 packer scales are expected to be tested and inspected under this program. In addition, steps will be taken to assure maintenance of proper weighing standards and practices by packers.

To make market weighing equipment more adequate and reliable, stockyard operators are required to replace obsolete with modern scales. They are encouraged to provide indicators and other weighing refinements which facilitate accurate balancing and rapid weighing. They are encour-

aged to substitute weighbeams with 5-pound graduations for old beams with 10-pound graduations, and to replace old carload-capacity scales with small, high-precision scales for weighing single animals or small lots. A number of dial-type scales with electric ticket-printing elements are in use at several supervised markets. The performance and test history of these installations are being studied to determine whether they have special advantages worth extending to all stockyard scales. At present, in cooperation with certain manufacturers of electronic measuring instruments, PMA scale engineers are experimenting with a device which will--entirely automatically--weigh the load, record the weight, and balance the scale after each draft.

Maintenance of suitable weighing equipment is essential, but will not alone assure accurate weights. Conscientious care as well as honesty on the part of the weigher are also essential. PMA assists stockyard managements in the proper training of weighers by furnishing written and oral instructions.

Most of our larger terminal markets were built at a time when rail receipts constituted most of their volume. During the last 15 years conditions have changed, yet many yards have not kept pace by making changes in their unloading, yarding, and weighing facilities that take into account the increase in truck receipts.

Each Yard Company's Facilities and Services Under Study

PMA marketing specialists and engineers are studying the kinds and qualities of facilities and services that each yard company furnishes, and the general character of the selling and buying services that commission firms, acting as agents, furnish to producers and agents. This is in line with the policy of emphasizing service improvements in connection with any proposed increases in yardage or commission rates. Primarily as a result of PMA activities in this respect, stockyard improvements totaling several million dollars have been initiated during the last 2 1/2 years by stockyard operators. A substantial part of this work has been completed, but it will take several years to complete some of the long-range programs of stockyard reconstruction and modernization undertaken by the industry. Extensive studies of stockyard facilities and services are being made at five major markets. These studies will be followed by specific recommendations that the stockyard operators concerned make the improvements promptly. Stockyard operators are not required to comply specifically with the recommendations. The operators are given the benefit of the recommendations, but the solution of the problems is left to their judgment.

During the war a great many newcomers entered the meat-packing business. Many of these packers were able to operate very profitably under wartime conditions, but have not been able to continue to operate so profitably. Failure by these packers to pay for livestock purchased at public stockyards has increased greatly. PMA has been working closely with trade organizations at the public markets to hold such losses to a minimum. There is no authority under the act for requiring bonds from packers to assure payment for livestock purchased. But at PMA's sugges-

tion, the selling agencies at many markets have taken uniform action to require packers of uncertain credit standing to furnish bonds covering their livestock purchases. Although agencies at a few markets have suffered heavy loss because war-born packers failed to pay for livestock purchased, the market interests have absorbed the losses instead of passing them on to their livestock producer-patrons.

Competitive Conditions Promoted

Regulation of packers during the last few years has centered on their buying operations. The primary aim in this has been to break any relations, existing between packer-buyers and commission firm employees or others at the public markets, that tend toward (1) regular channeling of livestock to certain packers, or (2) favoring of certain packers over other buyers. Action has also been taken to eliminate other market practices that have had the effect of restricting or limiting competition when buyers bid on producers' livestock. For example, selling agencies have had to stop recognizing "turn systems." Under such systems, the buyers of certain packers were given "first turn" or "first privilege" to bid on livestock before it was offered to other buyers. Everything possible is being done to assure open competitive conditions for the buying of all kinds of livestock at all public markets. According to PMA's interpretation of the act, all the packers, dealers, and other buyers operating at public markets must compete against one another in bidding on producers' livestock. They must not cooperate in any way in furtherance of their buying activities.

In its trade practice work under the act, PMA concentrated last year on obtaining improvement in the quality of the selling services furnished to producers and on eliminating any market practices considered detrimental to the interests of livestock producers or other patrons of the public markets. To measure how effective a selling job commission firms do for producers, PMA has set up a standard. This standard recognizes that commission firms ought to perform three primary functions. These firms should--

1. Stimulate and obtain active competition in bidding by buyers on all producers' livestock;
2. Provide expert salesmanship in disposing of such livestock to buyers; and
3. Furnish full and accurate accountings to producers of all sales made for their accounts.

PMA marketing specialists regularly observe the operations of registered commission firms. The specialists want to know whether commission firms' performance meets these standards. They also want to be sure the commission firms serve no masters but the livestock producers who employ them as selling agents.

As a part of the regulatory supervision, accountants periodically make thorough audits of the records that commission firms and dealers

must keep, under the act. Particular attention is paid to relations existing between commission firm employees and dealer speculators or packers. Numerous unfair or deceptive trade practices have been eliminated through appropriate informal or formal actions. For example, during the last year certain commission firms that had overcharged producers for feed were required to refund unjust charges totaling more than \$50,000. Similar refunds have been required by commission firms in cases where they realized profits through speculation on livestock consigned to them for sale, and where they overcharged shippers on selling commissions or other marketing costs. There is no way of estimating, with accuracy, how much money livestock producers have saved through the enforcement of the provisions that require maintenance of open competitive buying conditions. There is also no way of knowing how much producers have saved through the elimination of many unfair practices previously existing at certain public stockyards. But clearly these savings total many thousands of dollars every year.

The great majority of the men in the livestock marketing industry are fully conscious of the responsibilities they owe to their producer-patrons. But in an industry of such magnitude, in which thousands of transactions involving millions of dollars are closed each market day on the basis of oral bargaining, there are bound to be some who allow their personal interests to outweigh those of the absent shipper. A very large part of the livestock marketing industry cooperates actively to improve the public livestock markets. The Packers and Stockyards Act was passed primarily to protect the interests of producers who patronize public markets. If livestock producers are to realize the act's full benefits, they should all cooperate by reporting to the local market supervisors any inadequacies they observe in the facilities or services provided at supervised markets.

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FINAL GOALS SET FOR 1948 CROPS AND LIVESTOCK

Final 1948 production goals for most major crops and livestock were announced by USDA on March 11. Establishment of the goals follows a review of recommendations by State USDA Councils in adapting to local conditions the Department goals which were suggested to States last fall.

Goals for peanuts, some types of tobacco, sweetpotatoes, and truck crops for processing were still under consideration by States, and no exact comparison of totals with previous acreages could be made on March 11. But assuming 1948 goals for these few crops at Department-recommended levels, the 1948 goals would total 354 million acres, exceeding 1947 actual acreages by 7.4 million acres.

The 1948 goals call for increases over 1947 planted acreages for corn, oats, barley, sorghums, rye, flaxseed, and dry edible beans. Goals for wheat, rice, and soybeans are continued at the maximum acreages feasible in terms of good land use. Livestock and dairy goals are set as high as expected feed supplies make feasible, and remain virtually the same as were recommended to States in November.

Progress Reported Under Research and Marketing Act

Considerable research and service work has been undertaken in marketing, utilization, and production under the Research and Marketing Act (Public Law 733) since funds were first made available for putting the new law into effect on July 30, 1947. Nearly all of the 19 commodity advisory committees, appointed early in 1947, have met at least twice to discuss research recommendations and review work, and the National Advisory Committee has reviewed research needs and generally recommended the work that is in progress.

Nine million dollars was appropriated for the current fiscal year. This amount was allocated as follows: 2 1/2 million dollars as direct grants to the State experiment stations for all types of State or cooperative regional research; 3 million to the U. S. Department of Agriculture for research on new and wider uses of agricultural products; 1 1/2 million to the USDA for cooperative research with the States on agricultural research other than new and wider uses; and 2 million to the USDA for developing a better and more efficient system for distributing and marketing agricultural commodities.

Marketing and Utilization Work

Although the act requires that not less than 20 percent of the funds allocated directly to the States (Title I, Section 9(a)) be devoted to marketing research and services, approximately twice that amount is being used for such work. Some of the major problems against which this marketing research is being directed--much of it on a cooperative basis among several States or with USDA--deal with fruits and vegetables, cotton, livestock and livestock products, dairy and poultry products, and eggs. In addition to marketing work, research by and among the State experiment stations on agricultural problems includes work on new phases of basic production problems and giving new emphasis to such activities as human nutrition, new crops for industrial and other uses, and rural housing and farm structures.

The utilization part of the act (Title I, Section 10(a)) is aimed at these broad objectives: To develop new and improved uses for farm products; to improve human nutrition and extend food uses of farm products; and to preserve and improve quality and prevent spoilage of farm commodities from the time they are harvested until they reach the consumer. The greatest share of this research is being conducted or directly supervised by the Bureau of Agricultural and Industrial Chemistry and other appropriate bureaus of the Agricultural Research Administration.

Under Title I, Section 10(b), which provides for Federal-State cooperative research on problems other than utilization, work has been approved in the following categories: Developing new and more profitable uses of resources in manpower, soils, water, plants and animals; reduc-

ing the farm production hazards of insects and disease; promoting more efficient and satisfactory use of farm buildings, machinery, and power; and improving the marketing of agricultural commodities on a regional basis. A large share of this work is being done by bureaus of the Agricultural Research Administration and the Bureau of Agricultural Economics. In compliance with the act, one or more State experiment stations are cooperating in each project.

Work under the marketing part of the act (Title II) during the first year will concentrate on getting new and basic information along the following lines: Where and how to expand market outlets; how to reduce marketing costs and margins; development of new standards and grades, where necessary, to improve the marketability of farm products; how to improve and encourage wider use of better marketing methods, facilities, and equipment; how new processing and packaging techniques can be used to minimize waste and increase salability of farm produce, particularly in retail stores; and the collection of data and analyses of consumer demand and preferences for the products of agriculture. The Production and Marketing Administration, the Bureau of Agricultural Economics, and the Extension Service will conduct a large share of the work in these fields.

Under the provisions of the act which authorize the Secretary of Agriculture to contract with public or private agencies to have research done, about a sixth of the projects that have been approved authorize research or marketing service work under contract.

Good progress is being made on work under way. Several survey-type projects have been completed already; others are nearing completion. But in a great deal of all the research performed in agriculture or industry, it may take one, two, five, or more years for researchers to reach their objectives.

From a commodity standpoint the various fields of work have been grouped as follows: Cotton and cottonseed; dairying; fats and oils crops; field crops, including grain, feeds, seeds, rice, and dry beans and peas; forest products; fruits and vegetables; livestock; poultry; sugar; tobacco; and wool. In addition, a number of projects are of a cross-commodity nature--for example, storage, transportation, packaging, foreign trade.

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RESEARCH ON COTTON AND COTTONSEED

New and wider utilization of cotton and its byproducts is the objective of a large share of the cotton research being done this year under the Research and Marketing Act. In view of the increasing competition from synthetic fibers, paper, and foreign cotton, it was agreed by officials of the U. S. Department of Agriculture and the producer-industry cotton advisory committee that the utilization phase of the subject should receive the most attention. But high priority was also given to developing greater efficiency in production and marketing, with a view

to improving the competitive position of cotton from the standpoints of utility and cost of production. Several projects are in progress toward that end.

Much basic information is yet to be learned about the processing characteristics of cotton. The objective of one project is to make more effective and complete use of the many superior qualities inherent in cotton fiber. In this study these six new lines of work will be carried on:

(1) Which types of cotton fiber show maximum change on wetting and drying, and to what structural features can these processes be attributed?

(2) What causes the cellulose of cotton fiber to change on oxidation, and how can the adverse effects of it be reduced or eliminated?

(3) What are the possibilities of chemically bonding cotton fiber with resins to develop new cotton products?

(4) Can a higher degree of elastic recovery of cotton fiber be achieved through chemical treatment?

(5) Can a practical energy-measuring method be developed for evaluating the merits of cotton in such end products as tire cord and belting?

(6) As an aid to buyers of raw cotton for manufacture, can a dyeing process be developed for estimating immaturity in cotton?

This work will be conducted by the Bureau of Agricultural and Industrial Chemistry at its Southern Regional Research Laboratory, New Orleans, La., and will supplement related work now under way in that laboratory.

Usefulness of Different Fabric Constructions

The object of another project is to determine, by actual in-service tests, the usefulness to consumers of woven clothing and household fabrics of different types of fabric construction. Fabrics made entirely of cotton or of cotton in combination with other natural fibers will be used in these tests, which will concentrate on evaluating the serviceability of utility garments and household fabrics that might be acceptable to low- and medium-income groups. Another phase of this study will be to determine by service tests the comparative merits of clothing and household fabrics made from cotton and competitive manufactured fibers. This work will be conducted by the Bureau of Human Nutrition and Home Economics in cooperation with other agencies of the Department and with the State Agricultural experiment stations at Rock Hill, S. C., Knoxville, Tenn., and College Station, Tex.

Development of the tricot knitting machine, which permits high-speed production of certain warp-knitted fabrics, has given an advantage to the synthetic fibers. Existing cotton yarns cannot be used on this machine. Under another project will be studied methods of making cotton

yarns that can be knitted into fabrics on the high-speed tricot machine. Because the Department has not the facilities for conducting this work, it will be done under contract with a qualified private contractor with BAIC technical supervision.

Garments and other articles made of cotton are less resistant to soiling than those made from wool and certain other competing fibers. A project to find out why cotton fabrics get dirty easier than many others and what could be done about it has been approved. BAIC is responsible for having this study done under contract.

Under another project, also assigned to BAIC for contracting, researchers will investigate the possibility of determining the infra-red absorption or reflection characteristics of cotton cellulose. This work is important because many of the changes that occur in cotton fiber through deterioration of the cellulose by heat, light, and oxidation are difficult to determine by chemical means. There is an infra-red technique for measuring absorption of cotton cellulose, but it cannot be applied to opaque fibrous substances.

The presence of neps (tiny clumps of fiber in cotton yarn or fabrics woven from cotton) lowers the quality of many manufactured items. Little is known about what causes neps, and how to prevent them. BAIC will investigate the subject under contract.

Improvement of Cotton Warp Yarns for Carpets

Another phase of cotton research, considered important by the industry if cotton yarn is to compete with synthetics, is the improvement of cotton warp yarns for carpets. The project, to be conducted by BAIC under contract, will attempt to bring about the improvement through selection of cotton varieties with high fiber strength, studies of mechanical processing and stretching, and application of chemicals to increase friction between fibers and to bond fibers in the yarns.

The tensile strength of cotton fiber is an extremely important factor in determining the purpose for which a given lot of cotton can best be used by the manufacturer. It is important to have a quick and accurate way to measure the tensile strength of individual fibers. Experts agree that the Pressley tester, now widely used for this purpose, needs improvement. A project under technical supervision of BAIC is directed at this objective.

Improved equipment and techniques for cotton ginning and related processes are also needed, to minimize losses and increase the salability of cotton and cottonseed and to cope with current changes in cotton production and harvesting. Research on this problem is being undertaken jointly by the Bureau of Plant Industry, Soils, and Agricultural Engineering and the Production and Marketing Administration. Headquarters for the study will be at Stoneville, Miss. Various State agricultural experiment stations will cooperate.

This development of new and improved uses--and through them wider markets for cottonseed and other cotton byproducts--is the general goal

of another Research and Marketing Act project to be conducted by BAIC at its Southern Regional Research Laboratory. Several specific lines of study will be undertaken, as follows: Determination of the influence of environment and variety of cotton on the composition of cottonseed; development of commercial-scale methods or processes for the fractionation of cottonseed kernels into oil, meal, and pigment glands; influence of methods of processing upon the nutritional value of cottonseed meal and byproducts that are produced by new fractionation methods; and large-scale tests of processing cottonseed oil that has been produced by new methods of fractionation.

The development of equipment for mechanizing cotton in the South, particularly on small farms with 20 acres or so in cotton, is the object of a study to be made by the Bureau of Plant Industry, Soils, and Agricultural Engineering in cooperation with several State experiment stations. The various phases of the project are development of uniformly dependable methods and equipment for harvesting cotton; defoliating it before harvesting; seedbed preparation; delinting of cottonseed for planting; weed control; and better means of applying insecticides and fungicides. The studies will be correlated with problems of ginning mechanically harvested cotton.

More than a tenth of all cotton grown in the United States is ruined before harvest by insects. Although entomologists have gathered much information about the 100 or more insects that exist in cotton fields, we still lack much information about their life histories, habits, interrelationships, and potential destructiveness. The use of a single insecticide, such as calcium arsenate to control the boll weevil or DDT to control the boll worm, often starts a serious outbreak of cotton aphids. The answer to why this occurs will be sought in a project being conducted by the Bureau of Entomology and Plant Quarantine and the Bureau of Plant Industry, Soils, and Agricultural Engineering in cooperation with several State agricultural experiment stations and the research departments of several chemical and insecticide manufacturing companies.

Production of Types for Specific Requirements

A project on cotton marketing is aimed at bringing the production of various types of cotton more into line with specific requirements of the textile industry. Data will be obtained on the types and qualities of cotton being used as compared with types and qualities best suited for the various cotton products. Results should reflect economic as well as technological factors in cotton marketing and indicate the characteristics and adaptability of cotton produced in standardized-variety areas. These data should also be a guide to cotton breeders in developing varieties best adapted to specific end uses, and will indicate to producers the extent of available markets for various kinds of cotton. This study will be made by the Production and Marketing Administration.

Under a study to be conducted by the Bureau of Agricultural Economics, a basis will be sought for measuring the potential markets for cotton and cotton products. The results may provide a better understanding of the significance of the supply and comparative price for synthetic

fibers, the reasons for and effects of price differentials between grades and staples of cotton, the extent of the pyramiding of cotton prices at the various stages of cotton marketing, processing, and distribution, and the effect of price differentials on the demand for cotton.

Another project under the act provides for the assignment of commodity specialists to work in the United States and abroad to stimulate foreign demand for cotton and certain other products usually grown here in excess of normal domestic needs. Under the projects the Office of Foreign Agricultural Relations has completed a 3-month preliminary survey of cotton market difficulties and opportunities in the United Kingdom, the Netherlands, Belgium, Western Germany, Austria, Hungary, Czechoslovakia, Switzerland, Italy, and France. Other commodities assigned for study are fruit, tobacco, rice, and tree nuts.

In addition to the foregoing projects, which directly concern the cotton industry, work under way on a considerable number of so-called cross-commodity projects will at least indirectly affect the production, utilization, or marketing of cotton.

A series of studies is in progress to find out what consumers want as to quality and methods of marketing. The first three commodities being surveyed are potatoes, citrus fruit, and cotton textiles.

The results of several projects concerning insect and disease control, also in progress, will also apply to cotton. They are a study of nematodes in the South and Southwest; a study to determine the harmful effects of insecticides on animals and plants; and the development of improved equipment for applying insecticides and fungicides.

To keep farmers and agencies that are concerned with agriculture abreast of technological developments and to serve as a guide to more profitable farm-management practices, a study has been authorized to determine the economic effects of increased mechanization in the production of cotton, sugar, rice, and dairy products.

A cooperative Federal-State project in progress is intended to import plants from other parts of the world and test them in localities in this country where they offer promise as new breeding stock or new crops. Weed control is the object of another cooperative project.

New educational and local demonstrational work in marketing is the purpose of a project assigned to the Federal Extension Service in which about 30 State extension services are cooperating. On one phase of this work dealing with cotton, specialists in Arkansas, Georgia, Missouri, and New Mexico will demonstrate in local farmers markets the value of identifying individual bales of standardized, superior-quality cotton from gins to mills according to variety and area of growth. They will also seek more effective interpretation of cotton market price information.

The work outlined here is generally based on recommendations of the Cotton Advisory Committee, which was appointed on February 20, 1947, to recommend research looking to the solution of problems confronting the cotton industry.

Shell-Cooled Potato Storage

By Alfred D. Edgar

Research into problems of storing potatoes used to have the rather simple aims of keeping potatoes above freezing and below sprouting temperatures so that they would meet local requirements for seed and eating. Now the marketing of potatoes and, therefore, the objectives of research in their storage have become more complicated.

A larger proportion of the seed potatoes for central and southern areas is grown in the North, and northern-grown seed potatoes may have to be stored under one of three sets of conditions: At a relatively cold temperature for 7 or 8 months, when they are intended for seed to be used locally; at moderate temperatures for 6 or 7 months, for planting in the Central States; or at a relatively high temperature, to get them through the dormant period quickly, for early planting in the South.

The storage of table-stock potatoes also has become more complex. Potatoes for early consumption can be kept in warm-temperature storage with minimum air circulation, and it is now known that a higher vitamin content is retained by this treatment. Low temperatures, however, are required for long-period storage. It is obvious, therefore, that the temperatures at which potatoes are stored will depend largely on the specific use to which they are to be put and the time when they are to be marketed. Potatoes for dehydration and those used in the manufacture of potato chips require special storage conditions.

There is a growing tendency also for areas of different climates and different harvesting dates to grow and store potatoes for overlapping markets. For example, potatoes harvested early in the North may be kept in low-temperature storage for planting in the South, whereas those harvested farther south later must be stored at a higher temperature to get them through the dormant period in time for southern planting.

For many years, potato storage construction, particularly for the humid part of the country with average temperatures of 25° to 30° F. during January and February, featured bins having double-slatted floors and bin partitions, so the air could circulate through the mass of potatoes. Such through-the-bin circulation, however, reduces the vitamin content and increases the shrinkage of stored potatoes.

Shell-Cooling Process

Shell cooling of potato bins to reduce shrinkage and preserve better table quality has proved effective in the potato storage investigations of the Department in cooperation with several experiment stations in the late-crop potato States. The shell-cooling process consists of circulating air under and around the bins with tight walls and floors, rather than through the mass of potatoes. It is most satisfactory in large storages where power-operated blowers and thermostatic controls are used.

In the fall, outside air is drawn into the building and circulated to remove field heat from the potatoes. A differential thermostat can be set to start the blower whenever the outside temperature is lower than that of the potatoes. As the temperature drops, a second thermostat protects the potatoes from freezing by breaking the circuit. During the winter further cooling of the potatoes is not necessary, but air circulation is still required to maintain uniform temperatures and reduce condensation of moisture. Blower dampers are therefore arranged to recirculate air within the storage house around, under, and over the bins. In smaller houses that have a capacity of fewer than 10,000 bushels, gravity air circulation is usually satisfactory.

Potatoes kept in storages built and operated according to recommendations of agricultural engineering research show shrinkage losses from 1 to 10 percent less than other types of houses. At least 10 million bushels annually of late-crop potatoes are now stored in buildings of improved design, and the annual saving in shrinkage alone approximates \$120,000. Heavy losses from freezing and decay are prevented, and the potatoes for table use have higher nutritive value.

Additional savings are effected by shell circulation because the storage houses last longer, being less subject to damage by moisture. The new designs in these houses eliminate the condensation of moisture on the structural parts without allowing the potatoes to dry out.

Another problem that has come up in connection with the storage of potatoes in the past few years is the need for centralized washing and grading in storages. Twenty years ago most of the crop was sold ungraded and none of it was washed. When grading first became common, it was done by portable graders, which were moved right into the bins. Until recently, therefore, the principal handling problem was to design storages so that potatoes could be put into the bins with the least injury. Now, however, many storages use stationary washing and grading equipment and large stationary brushers. Some means must be worked out for moving potatoes from bins to graders, and various methods are being compared. Forty-bushel portable bins can be handled with industrial lift-trucks; potatoes in sacks or small boxes can be stacked on pallets and moved with industrial or hand-operated lift-trucks; or conveyors designed to avoid bruising the potatoes can be used from truck to storage and from storage to graders.

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MYERS NAMED HEAD OF PMA SUGAR BRANCH

Lawrence Myers has been appointed director of PMA's Sugar Branch, succeeding James H. Marshall, who has resigned effective April 3 to accept a position in private industry. Myers, who was associate director of the branch at the time of his appointment, has served with a number of USDA agencies, working on economic problems and handling the administration of production, marketing, and price-support programs with various agricultural commodities.

MARKETING BRIEFS:

Beans and Peas.--Revised allocation for export during the 1948 fiscal year of 2,299,500 bags (100 pounds) of dry beans and 2,007,100 bags of dry peas was announced by USDA on March 10.

Cotton.--The cotton sales export program was amended on March 23 to exclude subsidy payments on cotton paid for with funds provided under any act making funds available for foreign aid purposes.... The grade of the 1947 cotton crop was the highest since 1939. Grade index of the 1947 crop is estimated at 96.9 (Middling White equals 100), compared with 94.6 for the 1946 crop. The staple length, however, averaged somewhat shorter than the 1946 crop (31.7 thirty-seconds of an inch against 32.6).

Dairy Products.--Between March 9 and March 23, PMA announced the following activities concerning milk marketing agreements and orders: Scheduled public hearings to consider proposed changes in price differentials under the Cleveland order and the Tri-State (West Virginia, Ohio, and Kentucky) order; announced amendment to the New York City order; announced a new Class I price formula--subject to industry approval--under the Boston, Lowell-Lawrence, and Fall River, Mass., order; and announced a proposed price action under the Dayton-Springfield, Ohio, order.

Fats and Oils.--April-June 1948 fats and oils allocations totaling 89.2 million pounds, including exchanges for 5.2 million pounds of copra (oil equivalent) and palm kernel oil have been announced by USDA. The allocations have been announced as for commercial procurement, but with the reservation that they include any quantities that may subsequently be announced for Government procurement under relief programs.

Fruits and Vegetables.--Proposed amendments to the California-Arizona orange marketing order will be considered at public hearings in Los Angeles and Phoenix on April 6 and April 19, respectively. The proposals include, among others, the deletion of provisions relating to the handling of oranges grown in Arizona and the establishment of a surplus diversion program.... USDA has recommended adoption of a number of proposed amendments by the Industry Committee to the Georgia peach marketing agreement and order program. Among the principal amendments recommended are (1) authorization for the establishment of minimum standards of quality and maturity; (2) extension of duties of the Industry Committee to include additional activities; (3) payment of compensation and reimbursement of expenses to members and alternates of the Distributors' Advisory Committee; and (4) elimination of the biennial referendum.

Grain.--Export allocations of 241.5 million pounds (about 8.2 million bushels of grain equivalent) of cornmeal, hominy and corn grits, macaroni products, oatmeal, soya flour, cornstarch and corn flour, wheat cereal foods, pearl barley, and buckwheat for the 4 months March-June 1948 have been announced.... Offers of 454,230,000 pounds of flour (10,-

220,000 bushels of wheat equivalent) have been accepted by the Commodity Credit Corporation in accordance with purchase offers announced March 9 by PMA.... In mid-March, USDA estimated that 1,040,000 long tons (39,-651,000 bushels) of U. S. grain and grain products had been exported in February 1948. This raised the total for the 8 months July 1947-February 1948 to 10,816,000 long tons (417,472,000 bushels), compared with 7,-797,000 long tons (303,440,000 bushels) during the same period last year. ... A voluntary grain conservation agreement for the brewing industry, formally approved by the Attorney General, is being submitted to the industry for formal acceptance, USDA announced on March 24. This agreement represents the first voluntary industry program to be established under Public Law 395 (80th Congress). It is to become effective April 15, and to extend through June 30, 1948.

Meat.--Allocation of 13,370,000 pounds of meat and meat products for commercial export, largely to U. S. Government projects, the Philippines, and the American Republics, during the April-June quarter of 1948 was announced by USDA on March 18.

Potatoes.--USDA announced March 19 that it was recommending adoption of a proposed marketing agreement and order program for the handling of Irish potatoes produced in certain counties of Virginia and North Carolina.

Poultry.--USDA has amended its frozen egg export sales program to permit exporters to dry the eggs in this country before they are shipped to foreign outlets. Purpose of the amendment is to make possible the purchase of frozen eggs for foreign countries which lack facilities for handling, storing, and distributing eggs in this form.

Sugar.--USDA announced March 9 that the Commodity Credit Corporation had received requests from the State Department to make available 19,040 short tons of Cuban raw sugar for shipment to Austria and 31,360 short tons for shipment to Italy under the U. S. Foreign Aid Program. CCC will make sugar available to fulfill these requests from its purchases of 1948-crop sugar in Cuba.

Tobacco.--No change will be made in the 1948 national marketing quota for flue-cured tobacco of 955 million pounds, USDA announced on March 15 after an investigation of the supply and demand situation for this tobacco.

Food Deliveries.--Deliveries of food and agricultural commodities purchased by USDA totaled 2,482 million pounds in February 1948, on the basis of shipment and delivery reports received during the month.

February deliveries of grain and grain products made up 1,906 million pounds of the total. Other commodities and commodity groups: Fresh and canned vegetables, 157 million pounds; peanuts, 144 million pounds; sugar, 128 million pounds; rice, 98 million pounds; fats and oils (other than peanuts), 18 million pounds; fruits, 15 million pounds; and dairy products, 11 million pounds.

ABOUT MARKETING:

The following publications, issued recently, may be obtained upon request. To order, check on this page the items desired, detach and mail to the Production and Marketing Administration, U. S. Department of Agriculture, Washington 25, D. C.

Cotton Quality Statistics, United States, 1946-47. (PMA) CS-26. January 1948. 62 pp. (Multilithed)

School Lunch Recipes Using Potatoes. (PMA and the Bureau of Human Nutrition and Home Economics) PA 36. January 1948. 17 pp. (Multilithed)

The Wholesale Market for Fruits, Vegetables, Poultry, and Eggs at Columbus, Ohio. (PMA in cooperation with the College of Agriculture of Ohio State University) January 1948. 127 pp. (Mimeographed)

The Wholesale Market for Fruits, Vegetables, Poultry, and Eggs at Richmond, Va. (PMA in cooperation with the Department of Agricultural Economics, Virginia Agricultural Extension Service) March 1948. 91 pp. (Mimeographed)

Feed Statistics. (Bureau of Agricultural Economics) FdS - Sup. 8. December 1947. 41 pp. (Multilithed)

Rations Fed to Milk Cows, 1946-47. (Bureau of Agricultural Economics) January 1948. 28 pp. (Mimeographed)

Livestock on Farms January 1. (Bureau of Agricultural Economics) February 1948. 26 pp. (Mimeographed)

The Balance Sheet of Agriculture, 1947. (Bureau of Agricultural Economics) MP 642. February 1948. (Printed)

Milk Production on Farms and Statistics of Dairy Plant Products, 1947. (Bureau of Agricultural Economics) February 1948. (Mimeographed)

Peanuts--Acreage, Yield Per Acre, Production, Farm Disposition, and Value, 1909-45. (Bureau of Agricultural Economics) March 1948. 36 pp. (Multilithed)

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